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Conference Abstract

Reading Data Readings: Posthuman Poetry Authorship

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Abstract

1.0 Introduction

We present two works of digital poetry that explore the use of ecological sensor data as potential co-authors. By drawing on forest microclimate data, these works position nonhuman systems as active participants in poetic production, and we consider the ways in which this destabilises traditional notions of authorial intentionality. As ecological data infrastructures become increasingly complex, there is a need to explore their role beyond scientific domains (Åsberg 2024). In tandem to this need, scholars in the arts and humanities insist on the development of cultural and creative practices that recognize the agency of non-human ecological actors (Morton 2010, Krauth 2024, Bennett 2010). The practice of digital poetry offers an experimental mode for translating ecological data and processes into culturally resonant experiences.

2.0 Methodology

We explore this through a creative practice-led examination of how ecological data can be transformed into multisensory poetic experiences, experimenting practically with ways in which digital poetry may unveil environmental actors as co-authors of poetic texts and participants in creative production. Our work uses ecological data provided by the Norwegian Institute for Nature Research.

3.0 Background

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Digital poetry is poetry derived through computational processes and networked media (Rettberg 2018). Since the mid-twentieth century, poets have experimented with algorithms and software to expand their practice beyond the printed page (Funkhouser 2007, Glazier 2002). Meaning in such works arises through technotextual interplay between code, medium, and the reader (Hayles 2002). Reading digital poetry requires nontrivial engagement, sometimes closer to that of a computer game, through which it destabilizes traditional notions of authorship (Aarseth 1997). Poststructuralism—a philosophy emphasising knowledge and language structures as fluid (Barthes 1977, Foucault 1991)—further unsettled notions of the author in the twentieth century, and this shift is seen in the human/machine co-production often associated with digital poetry (Flores 2019).

The use of biosensing data as a material in digital poetry allows creators to consider ecological actors as non-representational generative systems. For example, Ackerman and Richert's *Getting Plants to Write Poems* (Ackerman and Richert 2014) demonstrates this by mapping plant bioelectricity into textual outputs, while Nelson's *Vholoce* (Nelson 2007) and Matsuda's *Every Thing Every Time* (Matsuda 2017) each use data pulled from weather and city sensors to structure verse and determine poetic outputs. Arguably, authorship in these works is not just an interaction between code, medium, and reader (as suggested by Hayles (2002)) but also of ecological conditions and nonhuman living entities that can shape digital poetry production through their actions or existence.

4.0. Discussing two pilot projects

Two digital poetry interfaces have so far been produced, which showcase the potential for human/nonhuman co-creation with ecological systems:

4.1 *(very) small stories*

A web-application interprets moisture and temperature readings of hyper-specific locations across Norway's Sigdal, Kvam and Grong forests. Each location holds four sensors that produce separate readings. A codeset reads and interprets these four sensor readings as combinatory fragments of text, producing fictionalized translations of the forest's thoughts, which change each time the temperature changes by 0.1 Celsius, or moisture changes by 0.1%. The resulting poetry is intentionally visually unstable, echoing the difficulty of translating non-human data into a human language (Krauth 2025). Instead of treating each data reading as a sentence-equivalent, the system parses each sensor as a quarter of a line, enabling a full line of poetry based on all four sensor readings (Fig. 1).

4.2 *we are both data*

we are both data is an installation that draws from the same datasets as *(very) small stories*, but further includes a bespoke galvanic skin response-to-MIDI touchable controller, where moisture readings from the skin of human interactors is interpreted on-screen into poetic text, and juxtaposed next to poetic text derived from the moisture readings of our forest sensor data. In this setup, both human participant and climate data

hold a similar level of creative authorship over the work's visual and textual outcomes; while it may be a passive writing process for both, it aims to allow for the recognition of similar agencies, under the metaphor of becoming physically in sync with the microclimate of a forest(Fig. 2).

I hold stillness between chills,
as branches pulse with radiance,
as dust hangs between the crowns,
until drizzle stains the moss.
I hold stillness between chills,
where insects map the heat,
while resin scents the forest skin,
and silt darkens the undergrowth.
I hold stillness between chills,
as wind balances between trunks,
as dust hangs between the crowns,
and seepage cools the roots.
Branches stretch without hurry,
where equilibrium steadies the grove,
as bark remembers gentle rain,
before dew pearls on each needle.
I steady myself in patient warmth,
as wind balances between trunks,
while roots strain toward water,
before dew pearls on each needle.
I steady myself in patient warmth,
while light drips evenly through branches,
and daylight balances my frame,
until rain soaks the clearing.
Branches stretch without hurry,
while light drips evenly through branches,
and twilight folds in quiet tones,
and damp loosens the mulch.
I steady myself in patient warmth,
while shade measures the daylight,
as breezes weave without haste,
as downpour grips the soil.
Branches stretch without hurry,
where the soil loosens its breath,
as breezes weave without haste,
as run off quickens the gully.
Buds test the edge of mild air,
as moss exhales in gentler shade,
as breezes weave without haste,
while spray needles my crown.
Branches stretch without hurry,
while shade measures the daylight,
and the grove exhales in chorus,
until humidity clings to bark.
Needles loosen their careful fists,
where equilibrium steadies the grove,
as breezes weave without haste,
before rivers hum beyond the grove.
Buds test the edge of mild air,
where the soil loosens its breath,
as the clearing holds its breath,
as run off quickens the gully.
My crown balances tempered light,
as rime scrolls across bark,
as twilight cracks in pale shards,
and silt darkens the undergrowth.
I lean into a measured breeze,
while frost knots the moss,
and the crown stills in ice,
as run off quickens the gully.
My crown balances tempered light,
while mist sharpens into ice,
while crystals bloom along bark,
as run off quickens the gully.
0.1–5°C
5.1–10°C
10.1–15°C
15.1–20°C
20.1–25°C
25.1–30°C
≥30.1°C
Soil

Figure 1.

Screenshot of *(very) small stories* early interface. Image © Alinta Krauth.

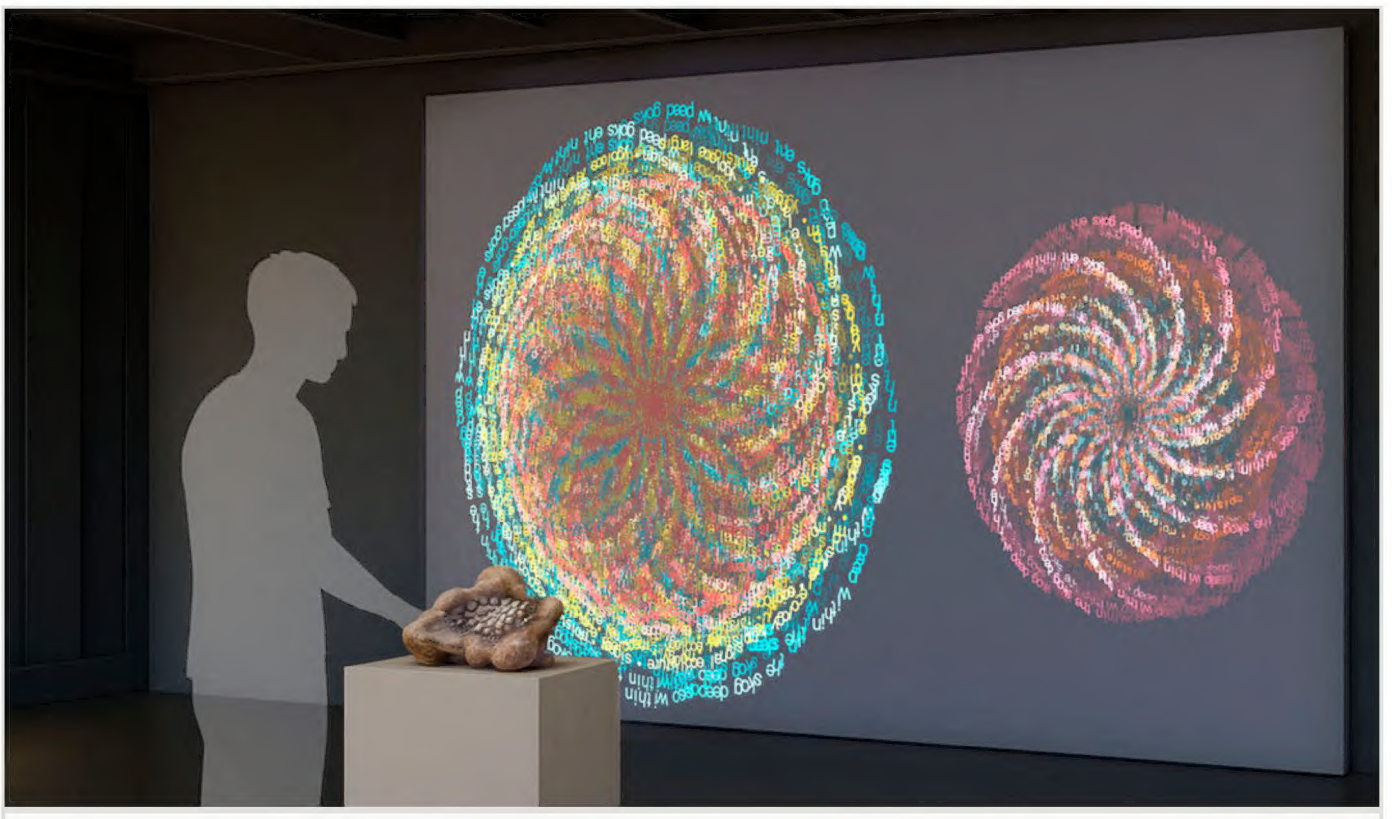

Figure 2.

Mockup of *we are both data* in gallery setting. Image © Alinta Krauth.

5. Early Conclusions

Digital poetry demonstrates how creative practice can operate as a bridge between data and culture. But it also opens up questions regarding the role of nonhuman agency in poetic authorship. By allowing microclimate data to shape poetic forms and outcomes in our two pilot projects, the intimate climates of forest locations have emerged as participants in poetic construction. This adds to a growing awareness in posthuman literature studies (or indeed returns to many Indigenous ideologies) that the ecological and climactic processes and systems around us influence digital, technological and creative productions.

Keywords

digital poetry, science communication, interdisciplinary, data visualization, posthumanism, practice-based research

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Conflicts of interest

The authors have declared that no competing interests exist.

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